CLAIMS:

1. An optical waveguide, which admits light from a point light source, converts the admitted light into an area light, and emits the area light, the waveguide comprising:

a light admitting portion for admitting light from the point light source; and

a light emitting portion continuously formed with the light admitting portion, wherein the light emitting portion includes an exit plane through which admitted light is emitted, and a reflecting portion formed at a side opposite from the exit plane,

wherein the light admitting portion includes an incidence portion, which is located at a side opposite from the light emitting portion and faces the point light source, wherein the light admitting portion has a width that increases from the incidence portion toward the light emitting portion, wherein the incidence portion includes a plurality of incidence planes parallel to a width direction of the light admitting portion, and a plurality of diffusing portions for diffusing light from the point light source, wherein the incidence planes and the diffusing portions are alternately arranged along the width direction of the light admitting portion, and wherein the light admitting portion includes a reflecting portion for reflecting light diffused by the diffusing portions so that the reflected light advances toward the light emitting portion.

2. The optical waveguide according to claim 1, wherein the light admitting portion is symmetrically widened from the incidence portion toward the light emitting portion.

3. The optical waveguide according to claim 1, wherein the diffusing portions are inclined faces that define V-shaped grooves, and wherein, in relation to the incidence

planes, the V-shaped grooves are recessed toward the light emitting portion.

4. The optical waveguide according to claim 3, wherein an angle defined by each of the inclined faces and the adjacent incidence plane is in a range between 120 degrees and 155 degrees inclusive.

5. The optical waveguide according to claim 3, wherein an angle defined by each of the inclined faces and the adjacent incidence plane is in a range between 130 degrees and 145 degrees inclusive.

6. The optical waveguide according to claim 1, wherein the diffusing portions are inclined faces that define triangle pole shaped projections, and wherein, in relation to the incidence planes, the projections project away from the light emitting portion.

7. The optical waveguide according to claim 6, wherein an angle defined by each of the inclined faces and the adjacent incidence plane is in a range between 120 degrees and 155 degrees inclusive.

8. The optical waveguide according to claim 6, wherein an angle defined by each of the inclined faces and the adjacent incidence plane is in a range between 130 degrees and 145 degrees inclusive.

9. The optical waveguide according to claim 1, wherein the reflecting portion includes a pair of flat reflection planes, wherein each of the reflection planes extends aslant from the incidence portion toward the light emitting portion, and wherein an angle defined by each reflection plane and a plane parallel to the incidence planes is in a

range between 35 degrees and 65 degrees inclusive.

10. The optical waveguide according to claim 1, wherein the reflecting portion includes a pair of flat reflection planes, wherein each of the reflection planes extends aslant from the incidence portion toward the light emitting portion, and wherein an angle defined by each reflection plane and a plane parallel to the incidence planes is in a range between 40 degrees and 50 degrees inclusive.

11. The optical waveguide according to claim 1, wherein the proportion of the incidence planes in the incidence portion is in a range between 35% and 55% inclusive.

12. The optical waveguide according to claim 1, wherein the ratio of an average value of an interval between each adjacent pair of the incidence planes to an average value of an interval between the centers of each adjacent pair of the diffusing portions is in a range between 0.25 and 0.8 inclusive.

13. The optical waveguide according to claim 1, wherein the ratio of an average value of an interval between each adjacent pair of the incidence planes to an average value of an interval between the centers of each adjacent pair of the diffusing portions is in a range between 0.45 and 0.65 inclusive.

14. The optical waveguide according to claim 1, wherein the light admitting portion is one of a plurality of light admitting portions arranged along the width direction of the light admitting portions.

15. The optical waveguide according to claim 1, wherein the point light source is one of a plurality of light

sources arranged along the width direction of the light admitting portion.

16. An area light source device, comprising:

a point light source; and

an optical waveguide, which admits light from the point light source, converts the admitted light into an area light, and emits the area light,

wherein the optical waveguide includes:

a light admitting portion for admitting light from the point light source; and

a light emitting portion continuously formed with the light admitting portion, wherein the light emitting portion includes an exit plane through which admitted light is emitted, and a reflecting portion formed at a side opposite from the exit plane,

wherein the light admitting portion includes an incidence portion, which is located at a side opposite from the light emitting portion and faces the point light source, wherein the light admitting portion has a width that increases from the incidence portion toward the light emitting portion, wherein the incidence portion includes a plurality of incidence planes parallel to a width direction of the light admitting portion, and a plurality of diffusing portions for diffusing light from the point light source, wherein the incidence planes and the diffusing portions are alternately arranged along the width direction of the light admitting portion, and wherein the light admitting portion includes a reflecting portion for reflecting light diffused by the diffusing portions so that the reflected light advances toward the light emitting portion.

17. A liquid crystal display device, comprising:

a liquid crystal panel; and

an area light source device provided at a back surface

of the liquid crystal panel, which is opposite from a display surface of the liquid crystal panel,

wherein the area light source device includes:

a point light source; and

an optical waveguide, which admits light from the point light source, converts the admitted light into an area light, and emits the area light,

wherein the optical waveguide includes:

a light admitting portion for admitting light from the point light source; and

a light emitting portion continuously formed with the light admitting portion, wherein the light emitting portion includes an exit plane through which admitted light is emitted, and a reflecting portion formed at a side opposite from the exit plane,

wherein the light admitting portion includes an incidence portion, which is located at a side opposite from the light emitting portion and faces the point light source, wherein the light admitting portion has a width that increases from the incidence portion toward the light emitting portion, wherein the incidence portion includes a plurality of incidence planes parallel to a width direction of the light admitting portion, and a plurality of diffusing portions for diffusing light from the point light source, wherein the incidence planes and the diffusing portions are alternately arranged along the width direction of the light admitting portion, and wherein the light admitting portion includes a reflecting portion for reflecting light diffused by the diffusing portions so that the reflected light advances toward the light emitting portion.